Amendments to the Specification

Please add the following paragraph before the first paragraph beginning at page 1, line 1:

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. provisional application serial no. 60/506,972 filed September 29, 2003, and U.S. provisional application serial no. 60/584,833 filed June 30, 2004 which are both incorporated herein by reference.

Please replace paragraph 2 on page 5 of the specification with the following paragraph:

The CPU 1 is connected to a memory 2 for storing images. Memory 2 can be volatile memory such as dynamic random-access memory (DRAM), or a non-volatile memory device such as Flash memory or a disk drive. Other suitable devices capable of storing information for later retrieval and use may be used as the memory 2. In particular, in the memory 2, there are stored a first image taken at a first point in time of a radiation therapy process and a second image taken at a subsequent point in time. For example, the first image may be taken before the start of the radiation treatment. An initial radiation dose distribution is determined on the basis of information contained in this first image. Then, during the radiation treatment, for example, after a plurality of radiation treatments or before another immediate radiation treatment, a second image is created. Variations in the ~~patent's~~patient's anatomy, such as shape and/or position changes of the organs in the target volume, are determined from a comparison of the first image and the second image and the dose distribution is automatically adjusted to take into account noted changes in the patient's anatomy.

Please replace paragraph 2 on page 7 of the specification with the following paragraph:

In accordance with the application of 3D surface models, a surface mesh, such as a triangular mesh, is applied to the organs in the initial CT image 12. This process is sometimes referred to as adaption. It should be noted that instead of triangular meshes, it is also possible to use simplex or polygonal meshes or other suitable surface or shape models. Then, this surface mesh is adapted to the surface of the organs in the initial CT image 12 by energy minimization.